This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-28(canceled).

29(new). A heating plate crystallization method for forming a poly-silicon layer, comprising the steps of:

forming an amorphous silicon layer on a substrate;

forming a thin oxide layer on the amorphous silicon layer;

forming a heating plate layer on the thin oxide layer;

patterning the heating plate layer to form a plurality of heating plate areas on a portion of the thin oxide layer, and another portion of the thin oxide layer is exposed; and performing a pulsed rapid thermal annealing process (PRTP) to heat the heating plate areas, wherein the heating plate areas transfer a heat energy to the amorphous silicon layer for melting the amorphous silicon layer, and the amorphous silicon layer is changed into a poly-silicon layer.

30(new). The heating plate crystallization method of claim 29, wherein the substrate is glass.

31(new). The heating plate crystallization method of claim 29, wherein the thin oxide layer is used to avoid metal pollution to the amorphous silicon layer in the pulsed rapid thermal annealing process (PRTP).

32(new). The heating plate crystallization method of claim 29, wherein the heating plate layer is made of a metal material with good IR absorption and thermal stability.

33(new). The heating plate crystallization method of claim 32, wherein the metal materia is MoW, Cr, or W.

34(new). The heating plate crystallization method of claim 29, wherein the pulsed rapid thermal annealing process (PRTP) has a process temperature over 700°C.

35(new). A heating plate crystallization method for forming a poly-silicon layer, comprising the steps of:

forming an amorphous silicon layer on a substrate;

forming a thin oxide layer on the amorphous silicon layer with a thickness sufficient to avoid metal pollution to the amorphous silicon layer during pulsed rapid thermal annealing;

forming a heating plate layer on the thin oxide layer;

patterning the heating plate layer to form a plurality of heating plate areas on a portion of the thin oxide layer, and

performing a pulsed rapid thermal annealing process (PRTP) to heat the heating plate areas, wherein the heating plate areas transfer a heat energy to the amorphous silicon layer for melting the amorphous silicon layer, and the amorphous silicon layer is changed into a poly-silicon layer.

36(new). The heating plate crystallization method of claim 35, wherein the substrate is glass.

37(new). The heating plate crystallization method of claim 35, wherein the heating plate layer is made of a metal material with good IR absorption and thermal stability.

38(new). The heating plate crystallization method of claim 37, wherein the metal materia is MoW, Cr, or W.

39(new). The heating plate crystallization method of claim 35, wherein the pulsed rapid thermal annealing process (PRTP) has a process temperature over 700°C.